



Sequence Listing.ST25
SEQUENCE LISTING

<110> Baehrecke, Eric H.

<120> GENES REGULATING PROGRAMMED CELL DEATH

<130> 4115-131

<140> 10/016,768

<141> 2001-10-29

<160> 12

<170> PatentIn version 3.2

<210> 1

<211> 53

<212> PRT

<213> Drosophila melanogaster

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His Arg Ala Gly Ser Tyr Tyr Gly Val Pro His Ser Thr Leu Glu Tyr
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Lys Val Lys Glu Arg
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<211> 53

<212> PRT

<213> Homo sapiens

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<211> 54

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<212> PRT

<213> Tetraodon Nigroviridis

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<212> PRT

<213> Mus musculus

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<212> PRT

<213> Caenorhabditis elegans

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<211> 4958

<212> DNA

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Sequence Listing 512
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<400> 8

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35 40 45

Gln Glu Gly Pro Leu Asp Leu Thr Val Asn Arg Met Gln Glu Gln Asn
50 55 60

Thr Gln Gln Gly Asp Gly Val Leu Asp Leu Ser Thr Lys Lys Thr Ser
65 70 75 80

Ile Lys Ser Glu Glu Ser Ser Ile Cys Asp Pro Ser Ser Glu Asn Ser
85 90 95

Val Ala Gly Arg Leu His Arg Asn Arg Glu Asp Tyr Val Glu Arg Ser
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115 120 125

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130 135 140

Gln Lys Thr Leu Leu Leu His Leu Glu Ala Leu Pro Ala Gly Lys Pro
145 150 155 160

Ala Ser Phe Lys Asn Lys Thr Arg Asp Phe His Asp Ser Tyr Ser Tyr
165 170 175

Lys Asp Ser Lys Glu Thr Cys Ala Val Leu Gln Lys Val Ala Leu Trp
180 185 190

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Glu Thr Ser Glu Ile Lys Phe Pro Thr Ala Ser Thr Tyr Leu His Gln
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225 230 235 240

Leu Gln Tyr Glu Thr Ser Asn Pro Thr Val Gln Leu Lys Ile Pro Gln
245 250 255

Leu Arg Val Ser Ser Val Ser Lys Ser Gln Pro Asp Gly Ser Gly Leu
260 265 270

Leu Asp Val Met Tyr Gln Val Ser Lys Thr Ser Ser Val Leu Glu Gly
275 280 285

Ser Ala Leu Gln Lys Leu Lys Asn Ile Leu Pro Lys Gln Asn Lys Ile
290 295 300

Glu Cys Ser Gly Pro Val Thr His Ser Ser Val Asp Ser Tyr Phe Leu
305 310 315 320

His Gly Asp Leu Ser Pro Leu Cys Leu Asn Ser Lys Asn Gly Thr Val
325 330 335

Asp Gly Thr Ser Glu Asn Thr Glu Asp Gly Leu Asp Arg Lys Asp Ser
340 345 350

Lys Gln Pro Arg Lys Lys Arg Gly Arg Tyr Arg Gln Tyr Asp His Glu
355 360 365

Ile Met Glu Glu Ala Ile Ala Met Val Met Ser Gly Lys Met Ser Val
370 375 380

Ser Lys Ala Gln Gly Ile Tyr Gly Val Pro His Ser Thr Leu Glu Tyr
385 390 395 400

Lys Val Lys Glu Arg Ser Gly Thr Leu Lys Thr Pro Pro Lys Lys Lys
405 410 415

Leu Arg Leu Pro Asp Thr Gly Leu Tyr Asn Met Thr Asp Ser Gly Thr
420 425 430

Gly Ser Cys Lys Asn Ser Ser Lys Pro Val
Page 10

Sequence Listing.ST25

435

440

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<213> Drosophila melanogaster

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Sequence Listing.ST25

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Sequence Listing.ST25

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Sequence Listing.ST25

Sequence Listing.ST25

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Sequence Listing.ST25

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<211> 1165

<212> PRT

<213> Drosophila melanogaster

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30			

Ser His Leu Asn Ile Glu Glu Gln Gln Pro Ile Ala Ile Ala Gly Ser			
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Glu Asp Glu Pro Ser Gln Tyr Asn His Ser Ser Lys Glu Ile Ser Gln			
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60			

Ser Asn Pro Asn His Cys Lys Thr Glu Asn His Arg Leu Glu Gln Gln			
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75	80		

His Asn Gly Ser Gln Leu Leu Glu Glu Asp Ser Glu Asn Asn Gln			
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95			

Thr Ser His Asp Ser Ser Arg Thr Pro Thr Pro Gly Ala Thr Ser Thr			
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110			

Pro Ser Pro Pro Pro Glu Pro Ile Asp Trp Arg Pro Ser Ala Lys Cys			
115	120	125	
125			

Asn Phe Cys Val Asn Gly Arg Leu Leu Thr Val Asn Ala Gln Gly Lys			
130	135	140	
140			

Leu Val Ala Glu Ser Ala Ala Thr Ala Thr Ser Ser Ser Thr Ser Asn			
145	150	155	160
155	160		

Ser His Ile His Gln His Asp Ser Asp Ser Asn Ser Ser Ala Ser Leu	
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Sequence Listing.ST25

165

170

175

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Asn Arg Ala Arg His Ile Ala Ala Ala Ser Ala Arg Ala Thr Pro Ala
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Ala Ala Thr Pro Ala Asn Ser Leu Glu Leu Tyr Lys Leu Leu Thr Gln
210 215 220

Arg Ala Ala Lys Met Thr Ser Met Asp Ser Met Ala Ala Gln Leu Ala
225 230 235 240

Gln Phe Ser Leu Leu Ala Asp Phe Asn Leu Ile Asn Ser Leu Ala Ser
245 250 255

Gln Gln Gln Gln Gln Gln Gln Ile Ala Ser Ala Val Thr Pro
260 265 270

Thr Thr Ser Glu Val Ser Ala Ala Ala Ile Ser Pro Ala Leu Lys Asp
275 280 285

Thr Pro Ser Pro Ser Val Asp Ala Pro Leu Asp Leu Ser Ser Lys Pro
290 295 300

Ser Pro Asn Ser Ser Ile Ser Gly Asp Val Lys Ser Val Arg Ala Cys
305 310 315 320

Ala Thr Pro Thr Pro Ser Gly Arg Arg Ala Tyr Ser Glu Glu Asp Leu
325 330 335

Ser Arg Ala Leu Gln Asp Val Val Ala Asn Lys Leu Asp Ala Arg Lys
340 345 350

Ser Ala Ser Gln His His Glu Gln Arg Ser Ile Leu Asp Asn Arg Leu
355 360 365

Phe Lys Met Lys His His Asp Gln Glu Gln Asp His Asp Gly Asp Glu
370 375 380

Leu Glu Asp Ser Asn Asp Asp Ala Glu Ala Glu Val Asp Ser Asn Ala
385 390 395 400

Ser Thr Pro Val Tyr Pro Ala Glu Phe Ala Arg Ala Gln Leu Arg Lys
405 410 415

Sequence Listing.ST25

Leu Ser His Leu Ser Glu His Asn Gly Ser Asp Leu Gly Glu Asp Val
420 425 430

Asp Arg Gly Ser Pro Lys Met Gly Arg His Pro Ala Cys Gly Asn Ala
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Ser Ala Asn Gln Gly Ala Pro Ala Ser Ile Pro Leu Asp Ala Asn Val
450 455 460

Leu Leu His Thr Leu Met Leu Ala Ala Gly Ile Gly Ala Met Pro Lys
465 470 475 480

Leu Asp Glu Thr Gln Thr Val Gly Asp Phe Ile Lys Gly Leu Leu Val
485 490 495

Ala Asn Ser Gly Gly Ile Met Asn Glu Gly Leu Leu Asn Leu Leu Ser
500 505 510

Ala Ser Gln Glu Asn Ser Asn Gly Asn Ala Ser Leu Leu Gln Gln
515 520 525

Gln Gln His Gln Gln His His Gln Gln His His Gln Gln Gln Gln
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Gln Gln His Val Ala Ala Tyr Arg His Arg Leu Pro Lys Ser Glu Thr
545 550 555 560

Pro Glu Thr Asn Ser Ser Leu Asp Pro Asn Asp Ala Ser Glu Asp Pro
565 570 575

Ile Leu Lys Ile Pro Ser Phe Lys Val Ser Gly Pro Ala Ser Ser Ser
580 585 590

Ser Leu Ser Pro Gly Gly Leu Val Gly Gly His His His Pro Leu Asn
595 600 605

Asn Asn Asn Ser Leu Ser Ile Ser Asn Asn Ser Asn His Ser Ser Asn
610 615 620

Ser His Arg Asn Gly Ser Asn Arg Ser Pro His Ser Ala Ser Pro Met
625 630 635 640

Leu Ala Ala Ala Val Ala Gln Gly Gly Tyr Ser Ala Gly Asn Ser Leu
645 650 655

Leu Thr Ser Ser Ser Ser Ile Gln Lys Met Met Ala Ser Asn Ile
660 665 670

Sequence Listing.ST25

Gln Arg Gln Ile Asn Glu Gln Ser Gly Gln Glu Ser Leu Arg Asn Gly
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Asn Val Ser Asp Cys Ser Ser Asn Asn Gly Gly Ser Ser Ser Leu Gly
690 695 700

Tyr Lys Lys Pro Ser Ile Ser Val Ala Lys Ile Ile Gly Gly Thr Asp
705 710 715 720

Thr Ser Arg Phe Gly Ala Ser Pro Asn Leu Leu Ser Gln Gln His His
725 730 735

Ser Ala His His Leu Thr His Gln Gln Gln Gln Gln Leu Ser Ala
740 745 750

Gln Glu Ala Leu Gly Lys Gly Thr Arg Pro Lys Arg Gly Lys Tyr Arg
755 760 765

Asn Tyr Asp Arg Asp Ser Leu Val Glu Ala Val Lys Ala Val Gln Arg
770 775 780

Gly Glu Met Ser Val His Arg Ala Gly Ser Tyr Tyr Gly Val Pro His
785 790 795 800

Ser Thr Leu Glu Tyr Lys Val Lys Glu Arg His Leu Met Arg Pro Arg
805 810 815

Lys Arg Glu Pro Lys Pro Gln Pro Asp Leu Val Gly Leu Thr Gly Pro
820 825 830

Ala Asn Lys Leu Gln Leu Asp Lys Leu Lys Ala Gly Pro His Gly Gly
835 840 845

Ser Lys Leu Ser Asn Ala Leu Lys Asn Gln Asn Asn Gln Ala Ala Ala
850 855 860

Ala Thr Pro Asn Gly
865 870 875 880

Leu Lys Leu Pro Leu Phe Glu Ala Gly Pro Gln Ala Leu Ser Phe Gln
885 890 895

Pro Asn Met Phe Trp Pro Gln Thr Asn Ala Thr Asn Ala Tyr Gly Leu
900 905 910

Asp Phe Asn Arg Ile Thr Glu Ala Met Arg Asn Pro Gln Ala Ser Asn
915 920 925

Sequence Listing.ST25

His His Gly Leu Met Lys Ser Ala Gln Asp Met Val Glu Asn Val Tyr
930 935 940

Asp Gly Ile Ile Arg Lys Thr Leu Gln Ala Ser Glu Gly Asn Gly Ser
945 950 955 960

Ala Ala Gly Asn Gly Ser Asn Gly Ser Asn Gly Asn Gly His Gly His
965 970 975

Gly His Gly His Ala Leu Leu Asp Gln Leu Leu Val Lys Lys
980 985 990

Thr Pro Leu Pro Phe Thr Asn His Arg Asn Asn Asp Tyr Ala Ala Thr
995 1000 1005

Cys Ser Ser Ala Ser Gly Glu Ser Val Lys Arg Ser Gly Ser Pro
1010 1015 1020

Met Gly Asn Tyr Ala Asp Ile Lys Arg Glu Arg Leu Ser Ala Asp
1025 1030 1035

Ser Gly Gly Ser Ser Asp Glu Glu His Ser Ala Ser His Ile Asn
1040 1045 1050

Asn Asn Asn Ser Asp Leu Ala His Asn Lys Asn Lys Ser Gly Gly
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Gly Gly Gly Gly Gly Asn Gly Gln Thr Asn Gly Asn Gly Arg
1070 1075 1080

Ser Ser Arg Met Thr Ser Arg Asp Asp Ser Glu Thr Asp Ala Ser
1085 1090 1095

Ser Phe Lys Ser Gly Glu Asn Gly Gly Gln Gln Asn His Lys Met
1100 1105 1110

Met Asp Leu Asn Gly Gly Ser Ser Ser Ser His Ile Lys Cys
1115 1120 1125

Glu Ser Glu Ala Ala Thr Gly His His Ser Pro Gly His His Thr
1130 1135 1140

Thr Ser Ile Leu His Glu Lys Leu Ala Gln Ile Lys Ala Glu Gln
1145 1150 1155

Val Asp Gln Ala Asp Gln Leu

Sequence Listing.ST25

1160

1165

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<212> PRT
<213> Drosophila melanogaster

<400> 11

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35 40 45

Glu Asp Glu Pro Ser Gln Tyr Asn His Ser Ser Lys Glu Ile Ser Gln
50 55 60

Ser Asn Pro Asn His Cys Lys Thr Glu Asn His Arg Leu Glu Gln Gln
65 70 75 80

His Asn Gly Ser Gln Leu Leu Glu Glu Asp Ser Glu Asn Asn Gln
85 90 95

Thr Ser His Asp Ser Ser Arg Thr Pro Thr Pro Gly Ala Thr Ser Thr
100 105 110

Pro Ser Pro Pro Pro Glu Pro Ile Asp Trp Arg Pro Ser Ala Lys Cys
115 120 125

Asn Phe Cys Val Asn Gly Arg Leu Leu Thr Val Asn Ala Gln Gly Lys
130 135 140

Leu Val Ala Glu Ser Ala Ala Thr Ala Thr Ser Ser Ser Thr Ser Asn
145 150 155 160

Ser His Ile His Gln His Asp Ser Asp Ser Asn Ser Ser Ala Ser Leu
165 170 175

Pro His His Ile Ser Ser Ser Ser Ser Asn Asn Asn Ser Ser Gly
180 185 190

Asn Arg Ala Arg His Ile Ala Ala Ala Ser Ala Arg Ala Thr Pro Ala
195 200 205

Ala Ala Thr Pro Ala Asn Ser Leu Glu Leu Tyr Lys Leu Leu Thr Gln
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Sequence Listing.ST25

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Arg Ala Ala Lys Met Thr Ser Met Asp Ser Met Ala Ala Gln Leu Ala
225 230 235 240

Gln Phe Ser Leu Leu Ala Asp Phe Asn Leu Ile Asn Ser Leu Ala Ser
245 250 255

Gln Gln Gln Gln Gln Gln Gln Ile Ala Ser Ala Val Thr Pro
260 265 270

Thr Thr Ser Glu Val Ser Ala Ala Ala Ile Ser Pro Ala Leu Lys Asp
275 280 285

Thr Pro Ser Pro Ser Val Asp Ala Pro Leu Asp Leu Ser Ser Lys Pro
290 295 300

Ser Pro Asn Ser Ser Ile Ser Gly Asp Val Lys Ser Val Arg Ala Cys
305 310 315 320

Ala Thr Pro Thr Pro Ser Gly Arg Arg Ala Tyr Ser Glu Glu Asp Leu
325 330 335

Ser Arg Ala Leu Gln Asp Val Val Ala Asn Lys Leu Asp Ala Arg Lys
340 345 350

Ser Ala Ser Gln His His Glu Gln Arg Ser Ile Leu Asp Asn Arg Leu
355 360 365

Phe Lys Met Lys His His Asp Gln Glu Gln Asp His Asp Gly Asp Glu
370 375 380

Leu Glu Asp Ser Asn Asp Asp Ala Glu Ala Glu Val Asp Ser Asn Ala
385 390 395 400

Ser Thr Pro Val Tyr Pro Ala Glu Phe Ala Arg Ala Gln Leu Arg Lys
405 410 415

Leu Ser His Leu Ser Glu His Asn Gly Ser Asp Leu Gly Glu Asp Val
420 425 430

Asp Arg Gly Ser Pro Lys Met Gly Arg His Pro Ala Cys Gly Asn Ala
435 440 445

Ser Ala Asn Gln Gly Ala Pro Ala Ser Ile Pro Leu Asp Ala Asn Val
450 455 460

Sequence Listing ST25

Leu Leu His Thr Leu Met Leu Ala Ala Gly Ile Gly Ala Met Pro Lys
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Leu Asp Glu Thr Gln Thr Val Gly Asp Phe Ile Lys Gly Leu Leu Val
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Ala Asn Ser Gly Gly Ile Met Asn Glu Gly Leu Leu Asn Leu Leu Ser
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Ala Ser Gln Glu Asn Ser Asn Gly Asn Ala Ser Leu Leu Gln Gln
515 520 525

Gln Gln His Gln Gln His His Gln Gln His His Gln Gln Gln Gln
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Gln Gln His Val Ala Ala Tyr Arg His Arg Leu Pro Lys Ser Glu Thr
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Pro Glu Thr Asn Ser Ser Leu Asp Pro Asn Asp Ala Ser Glu Asp Pro
565 570 575

Ile Leu Lys Ile Pro Ser Phe Lys Val Ser Gly Pro Ala Ser Ser Ser
580 585 590

Ser Leu Ser Pro Gly Gly Leu Val Gly Gly His His His Pro Leu Asn
595 600 605

Asn Asn Asn Ser Leu Ser Ile Ser Asn Asn Ser Asn His Ser Ser Asn
610 615 620

Ser His Arg Asn Gly Ser Asn Arg Ser Pro His Ser Ala Ser Pro Met
625 630 635 640

Leu Ala Ala Ala Val Ala Gln Gly Gly Tyr Ser Ala Gly Asn Ser Leu
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Asn Val Ser Asp Cys Ser Ser Asn Asn Gly Gly Ser Ser Ser Leu Gly
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Tyr Lys Lys Pro Ser Ile Ser Val Ala Lys Ile Ile Gly Gly Thr Asp
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Sequence Listing.ST25

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Ser Ala His His Leu Thr His Gln Gln Gln Gln Gln Leu Ser Ala
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Gln Glu Ala Leu Gly Lys Gly Thr Arg Pro Lys Arg Gly Lys Tyr Arg
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Asn Tyr Asp Arg Asp Ser Leu Trp Arg Arg Ser Arg Arg Cys Arg Glu
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Leu Lys Cys Arg Phe Ile Glu Arg Val Ala Thr Met Arg Thr Ala Phe
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His Thr Gly Val Gln Gly Gln Gly Thr Ser Pro Asp Ala Thr Ala Gln
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Ala Arg Ala Gln Ala Ala Ala Arg Ser Arg Arg Pro Asp Arg Thr Ser
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Gln Gln Ala Ala Ala Gly Gln Thr Glu Gly Gly Thr Thr Trp Trp Leu
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Gln Ala Glu Gln Cys Pro Gln Glu Pro Lys Gln Ser Gly Gly Cys Gly
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Gly Gly Gly Ser Ser Ser Gly Arg Cys His Ala Gln Arg Pro
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Glu Thr Ala Pro Phe Arg Gly Gly Ser Thr Gly Val Ile Leu Ser Ala
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Glu His Val Leu Ala Pro Asp Glu Arg His Glu Cys Leu Arg Pro Gly
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Leu Gln Ser His His Gly Gly Asp Ala Glu Phe Pro Gly Leu Gln Ser
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Pro Arg Leu Met Lys Ser Ala Gln Asp Met Val Gly Glu Arg Leu Arg
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Trp His His Gln Glu Asp Ala Ala Gly Glu Gln Gly Asn Gly Ser Ala
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Ala Gly Asn Gly Ser Asn Gly Ser Asn Gly Asn Gly His Gly His Gly
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Sequence Listing.ST25

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Lys Ser Gly Glu Asn Gly Gln Gln Asn His Lys Met Met Asp
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Tyr Lys Ser Leu Asn Arg Ile Ile Tyr Ile Tyr Ile Tyr Ile Tyr
Page 25

1205

Sequence Listing.ST25
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Sequence Listing.ST25

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Sequence Listing.ST25

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Sequence Listing.ST25

Sequence Listing 5723
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Sequence Listing.ST25

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Sequence Listing.ST25

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